

What is claimed is:

- 5 1. A method for detecting defects in a magnetic medium of a data handling system, the magnetic medium having a number of user data wedges each disposed between an adjacent pair of servo data wedges, the servo data wedges storing servo control data and the user data wedges configured to store user data in data sectors, each user data wedge having a unique address in relation to angular position of the user data wedge on the magnetic medium, the method comprising steps of:
- 10 (a) writing a predetermined sequence of data to the user data wedges;
- (b) reading the data from the user data wedges to generate a readback signal;
- (c) generating a sequence of discrete time sample values from the readback signal; and
- 15 (d) identifying a defect in the magnetic medium in relation to the discrete time sample values and outputting to a buffer of the data handling system a multi-bit information record having at least one bit composing the address of the user data wedge containing the defect.
- 20 2. The method of claim 1, wherein identifying step (d) further comprises outputting to the buffer a second multi-bit informational record having at least one bit composing an address of the defect within the user data wedge containing the defect.
- 25 3. The method of claim 1, further comprising a step of (e) outputting nothing to the buffer when a user data wedge is found to be defect free.
4. The method of claim 1, wherein the predetermined sequence of data of writing step (a) comprises a 2T oscillating pattern.
- 30

5. The method of claim 1, wherein the data handling system comprises a disc drive and the magnetic medium comprises a rigid, rotatable magnetic recording disc.

5 6. The method of claim 1, wherein a selected servo data wedge corresponds to an index point as an angular reference for the magnetic medium, wherein selected servo data wedge immediately precedes a first user data wedge, and wherein the reading step (b) commences at a selected data wedge other than the first user data wedge on the magnetic medium.

10

7. The method of claim 1, further comprising a step of:
(e) formatting the data handling system to form a plurality of user available data sectors in the user data wedges for subsequent use in storing user data, wherein a user available data sector is not formed over a defect detected during identifying step (d).

15

8. The method of claim 1, wherein the predetermined sequence of data of writing step (a) is written across the complete angular extent of each user data wedge.

20

9. A data handling system, comprising:

a magnetic medium having a number of user data wedges each disposed between an adjacent pair of servo data wedges, the servo data wedges storing servo control data and the user data wedges configured to store user data in data sectors, each user data wedge having a unique address in relation to angular position of the user data wedge on the magnetic medium;

a head which writes a predetermined sequence of data to the user data wedges and subsequently reads the data from the user data wedges to generate a readback signal;

a read channel which generates a sequence of discrete time sample values from the readback signal;

a data buffer configured to temporarily store data during transfer between the magnetic medium and a host device; and

a media scan controller which identifies a defect in the magnetic medium in relation to the discrete time sample values and outputs to the data buffer a multi-bit information record having at least one bit composing the address of the user data wedge containing the defect.

10. The data handling system of claim 9, wherein the media scan controller further outputs to the data buffer a second multi-bit information record having at least one bit composing an address of the defect within the user data wedge containing the defect.

11. The data handling system of claim 9, wherein the media scan controller does not write information to the buffer when no defects are detected.

12. The data handling system of claim 9, wherein the predetermined sequence of data comprises a 2T oscillating pattern.

13. The data handling system of claim 9, wherein the data handling system comprises a disc drive and the magnetic medium comprises a rigid, rotatable magnetic recording disc.

5 14. The data handling system of claim 9, wherein a selected servo data wedge corresponds to an index point as an angular reference for the magnetic medium, wherein selected servo data wedge immediately precedes a first user data wedge, and wherein the head commences reading the data at a selected data wedge other than the first user data wedge on the magnetic medium.

10

15. The data handling system of claim 9, wherein the media scan controller further generates a defect map identifying a defective sector location corresponding to the defect so that, during a subsequent formatting operation, a user available data sector is not provided at the defective sector location.

16. A data handling system, comprising:

a magnetic medium having a number of user data wedges each disposed between an adjacent pair of servo data wedges, the servo data wedges storing servo control data and the user data wedges configured to store user data in data sectors, each user data wedge having a unique address in relation to angular position of the user data wedge on the magnetic medium;

a head which writes a predetermined sequence of data to the user data wedges and subsequently reads the data from the user data wedges to generate a readback signal;

a read channel which generates a sequence of discrete time sample values from the readback signal;

a data buffer configured to temporarily store data during transfer between the magnetic medium and a host device; and

first means for identifying a defect in the magnetic medium in relation to the discrete time sample values, for outputting to the data buffer a multi-bit information record having at least one bit composing the address of the user data wedge containing the defect, and for outputting to the data buffer a second multi-bit information record having at least one bit composing an address of the defect within the user data wedge containing the defect.

17. The data handling system of claim 16, wherein the first means does not write information to the data buffer when no defects are detected.

18. The data handling system of claim 16, wherein the first means comprises a media scan controller circuit.

19. The data handling system of claim 16, wherein the predetermined sequence of data comprises a 2T oscillating pattern.

20. The data handling system of claim 16, wherein a selected servo data wedge corresponds to an index point as an angular reference for the magnetic medium, wherein selected servo data wedge immediately precedes a first user data wedge, and wherein the head commences reading the data at a selected data wedge other than the first user data wedge on the magnetic medium.

5